

## In The Claims

23. (Once Amended) A computer-implemented method for estimating market value of a used vehicle, the method comprising:

A) receiving data from a nearest neighbor database consisting of a number K of used vehicle nearest neighbor records, each used vehicle nearest neighbor record comprising resale information and a plurality of used vehicle features, at least one target used vehicle record comprised of a plurality of used vehicle features, at least one constraint for determining a neighbor relationship between a pair of used vehicles, and a neighborhood distance function for determining a distance between a pair of used vehicles, the number K is iteratively selected for estimation accuracy based on a historical database of N used vehicle records; and

B) determining an estimated value for the at least one target used vehicle based on the data from the nearest neighbor database, the at least one target used vehicle record, the at least one constraint, and the neighborhood distance function,

wherein the estimated value of the at least one target used vehicle is relied upon by individuals to at least price used vehicles for resale.

24. (Once Amended) The method of claim 23 wherein the determining step includes the use of neural networks.

26. (Once Amended) The method of claim 23, wherein determining step B) is comprised of:

B1) for each used vehicle nearest neighbor record in the nearest neighbor database, determining a weighted estimated value for the used vehicle nearest neighbor based on the data from the nearest neighbor database, the at least one target used vehicle record, the at least one constraint, and the neighborhood distance function; and

B2) determining an estimated value for the at least one target used vehicle based on the weighted estimated values for the number K of used vehicle nearest neighbors.

31. (Once Amended) The method of claim 30, wherein the at least one used vehicle record further comprises resale plan information.

33. (Once Amended) A computer-implemented method for estimating market value of a used vehicle, the method comprising:

A) receiving data which includes:

$V_1$  comprised of a number  $N$  of  $v_1$ , each  $v_1$  comprising resale information and  $f_1$ ,  $V_2$  comprised of at least one  $v_2$ , each  $v_2$  comprised of  $f_2$ ,  $\text{Const}$ ,  $F_d$ ,  $K$ , and  $\text{Error}_p$ ;

B) determining an  $\text{Error}_K$  based on  $V_1$ ,  $\text{Const}$ ,  $F_d$ , and  $K$ ; and

C) if  $\text{Error}_K$  is less than about  $\text{Error}_p$ , then

C1) determining an estimated value for each  $v_2$  in  $V_2$  based on  $V_1$ ,  $V_2$ ,  $\text{Const}$ ,  $F_d$ , and  $K$ ;

C2) setting  $K$  to  $K$  plus 1 and  $\text{Error}_p$  to  $\text{Error}_K$ ; and

C3) looping to step B),

wherein:

$V_1$  equals data from a historical database comprised of a number  $N$  of used vehicle records,

$v_1$  equals a used vehicle record in  $V_1$ ,

$f_1$  equals a plurality of vehicle features of  $v_1$ ,

$V_2$  equals a data set comprised of at least one target used vehicle record,

$v_2$  equals a target used vehicle record,

$f_2$  equals a plurality of vehicle features of  $v_2$ ,

$\text{Const}$  equals an at least one constraint for determining a neighbor relationship between a pair of used vehicles,

$F_d$  equals a neighborhood distance function for determining a distance between a pair of used vehicles,

$K$  equals a nearest neighbor value,

$\text{Error}_p$  equals a previous estimation error, and

$\text{Error}_K$  equals a used vehicle market error,

wherein the estimated value of each  $v_2$  in  $V_2$  is relied upon by individuals to at least price used vehicles for resale.

35. (Once Amended) The method of claim 33 wherein step B) is comprised of:

- B1) for each  $v_1$  in  $V_1$ ,  
B11) determining a neighbor group  $V'$  of  $K$  used vehicles  $v'$  for  $v$  from  $V_1$  based on  $\text{Const}$ ,  $F_d$ , and  $f_1$ ;  
B12) for each  $v'$  in  $V'$ , determining a weighted estimated value for  $v_1$  based on  $v'$ ,  $f_1$  and  $F_d$ ;  
B13) determining an estimated value for  $v_1$  based on each weighted estimated value of  $v_1$ ;  
B14) determining an estimated error for  $v_1$  based on the estimated value for  $v_1$  and the resale price of  $v_1$ ; and  
B2) determining  $\text{Error}_K$  based on the estimated error for each  $v_1$  in  $V_1$ , and  $N$ .

36. (Once Amended) The method of claim 33 wherein step C1) is comprised of:

- for each  $v_2$  in  $V_2$ ,  
C11) determining a nearest neighbor group  $V''$  of  $K$  used vehicles  $v''$  for  $v_2$  from  $V_1$  based on  $\text{Const}$ ,  $F_d$ ,  $f_1$ , and  $f_2$ ;  
C12) for each  $v''$  in  $V''$ , determining a weighted estimated value for  $v_2$  based on  $v''$ ,  $F_d$ ,  $f_1$ , and  $f_2$ ;  
C13) determining an estimated value for  $v_2$  based on each weighted estimated values of  $v_2$ .

37. (Once Amended) The method of claim 36 further comprising C14) storing  $v_2$  with the estimated value for  $v_2$  in a data set  $V_3$  of used vehicles  $v_3$  with estimated market values.

38. (Once Amended) The method of claim 33, wherein  $f_1$ , and  $f_2$  include at least two items selected from the group consisting of vehicle type, model, series, trim level,

engine type, transmission type, moon roof equipped, leather interior, interior color, and exterior color.

40. (Once Amended) The method of claim 39, wherein each  $v_2$  further comprises planned resale information, wherein the planned resale information includes at least one item selected from the group consisting of intended resale date, region and resale channel.

41. (Once Amended) The method of claim 33, wherein the determining step C1) includes the use of neural networks.

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